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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/463,527	01/25/2000	GERNOT VON DER STRATEN	P99.1864	6446

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EXAMINER

SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/463,527

Applicant(s)

VON DER STRATEN, GERNOT

Examiner

Gregory B. Sefcheck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

- Applicant's Amendment filed 2/17/2005 is acknowledged.
- Claims 17-32 have been amended.
- Claims 17-32 remain pending.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acharya et al. (US005903559A), hereafter Acharya, in view of Burwell et al. (US005818842A), hereafter Burwell.

- In regards to Claims 17, 21, 22, and 28,

Acharya discloses a method and switching unit for internet protocol over ATM cell transport (Title; claim 17,28 – method and switching unit for use in a communication network).

Referring to Figs. 3-5a, Acharya discloses transporting IP packets, which are known to specify a destination address and vary in length, in ATM cells of a fixed length comprising a header containing identifiers of virtual paths and virtual circuits, for transmission over the network (Col. 2, lines 13-48; claim 17,28 – first protocol data

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frames containing message data and a destination address; claim 17,28 – host device generating second protocol data packets comprising a portion of the data frame that contains a connection identifier; claim 17,28 – transmitting data packets over communication network; claim 22 – first protocol is IP and second protocol is ATM).

Referring to Fig. 5, Acharya discloses IP packets transmitted along a VC-mapped link 505 from source node 500. Upon receipt at node 520, the destination address of the IP data is processed by the associated, coupled router 525 (Col. 7, lines 16-35; claim 17,28 – switching device receives data packet; claim 17,28 - reading destination address of the received data packet).

Acharya discloses that VC mapping is done on a link-by-link basis at each receiving node (Col. 6-7, lines 65-4). A new VC is picked for link 524 by the node 520 (Col. 7, lines 40-41; claim 17,28 – selecting a second connection identifier based on destination address).

Acharya discloses that cells of IP packets that have been queued while IP processing is performed are flushed to the port allocated to the new VC on link 524 while all the other IP cells on the VC incoming to node 520 are allowed to bypass the route processing requirement and be directly cell switched on the new VC (Col. 7, lines 45-50; claim 17,28 – generating a new data packet containing the second connection identifier from the received data packet; claim 17,28 – receiving data packets generated from the data frame while generating new packets; claim 21 – switching device receives plural data packets, reads the destination addresses, selects second connection

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identifier and generates new data packets from the plural received packets; claim 21 – generating new data packets occurs contemporaneously with receipt of data packets).

Acharya describes implementation of AAL layers in the protocol stack of the ATM switch, but does not expressly disclose checking the message data of the data frame for errors according to a predetermined error checking technique by comparing reference data having a rated value and contained in the data frame to the message data.

Burwell discloses an IP over ATM network in which ATM segmentation and resassembly and AAL5 processing are performed at network switches (Ridges; Col. 8, lines 52-67; Col. 3-4, lines 29-63). Burwell discloses the use of comparing a checksum field in received data to the message data to check for errors during transmission (Col. 14, lines 6 and 50-53; claim 17,28 – checking message data of data frame for errors according to a predetermined error checking technique, comprising comparing reference data having a rated value and contained in data frame to message data; claim 17,28 – transmitting new data packets of data frame that are error-free).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and switching unit of Acharya by utilizing a CRC or checksum technique for identify errors in the transmitted data, as shown by Burwell. Such a modification would enable subsequent transmission of error-free data, thereby increasing throughput of usable data and overall system efficiency.

- In regards to Claims 18-20,

Acharya discloses a method and switching unit for Internet protocol over ATM cell transport that covers all limitations of the parent claims.

Acharya does not explicitly disclose modifying message data of the data frame to contain a counter value dependent on prior transmissions of the data frame and generating new reference data for the data frame according to error checking technique.

Burwell discloses switches modifying the network header of the packet by decrementing the TTL and adjusting the checksum field (Col. 10, lines 59-62; claim 18 – switching device modifying message data of data frame; claim 18 – generating new reference data for data frame to compare to modified message data in predetermined error checking technique; claim 19 – message data is modified to include a counter value based on prior data packet transmissions of data frame; claim 20 – switching device receives plural data packets, reads the destination addresses, selects second connection identifier and generates new data packets from the plural received packets; claim 20 – checking of message data for transmission errors and generating new reference data occur contemporaneously with generating new data packets of data frame).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the message data in the method and switching unit of Acharya by decrementing the TTL (hop-count) of the packet according to IP protocol and generating a new checksum so that the error checking method can be reiterated for successive received data packets. This modification allows the ATM switch to perform various IP

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processing functions that enable IP-over-ATM transmission. New checksum generation is thus enabled to fluidly identify errors in received packets and update the checksum for subsequent data packets while transmission of the error-free data packets to the next hop in the network proceeds.

- In regards to Claims 23, 26, 27, 29, 31, and 32,

Acharya discloses a method and switching unit for internet protocol over ATM cell transport that covers all limitations of the parent claims.

Acharya discloses the use of a VP/VC routing table (associative memory; claim 27,32 – one of revaluation memories is an associative memory) for routing data packets to the router 525 for initial IP processing (first revaluation memory) as well as forwarding of subsequent packets on a VC to the next hop in the network (second revaluation memory; Col. 7, lines 25-50; claim 23 – storing an entry for use in recognizing received data packet in a first revaluation memory; claim 26,31 – storing second connection identifier for data packet containing destination address in second revaluation memory, which is used for allocating second connection identifier to destination address; claim 29 – first revaluation memory for allocating second connection identifier to at least one connection identifier of a received data packet).

- In regards to Claims 24 and 25,

Acharya discloses a method and switching unit for internet protocol over ATM cell transport that covers all limitations of the parent claims.

Acharya shows that once IP processing has been performed on the initial data packet of an IP data flow, the routing table is updated to reflect the new VP/VC for properly forwarding of subsequent packets of the flow, without the need for processing by the IP router, until a packet of a new flow is received (Col. 7, lines 37-50; claim 24 – overwriting the entry in first revaluation memory with second connection identifier after receiving data packet of data frame; claim 24 – overwriting second connection identifier with entry after receiving last data packet of data frame; claim 25 – second connection identifiers for data packets received after data packet containing destination address are identified using second connection identifier stored in first revaluation memory).

- In regards to Claim 30,

Acharya discloses a method and switching unit for internet protocol over ATM cell transport that covers all limitations of the parent claims.

Acharya shows that all unknown VCs of received data packets at node 524 are routed to a port with access to the IP router, which performs IP processing to establish a proper VC/VP for subsequent data packets of that particular flow (Col. 7, lines 25-28 and 44-50; claim 30 – first revaluation memory contains a predetermined entry identifying connection identifiers of received data packets)



***Response to Arguments***

3. Applicant's arguments filed 2/17/2005 have been fully considered but they are not persuasive.

- In the Remarks on pg. 17 of the Amendment, the Applicant contends that Acharya does not disclose a switching device that receives data packets generated from the data frame while the new data packet is being generated. Applicant contends that router 525 decides the output port of a newly generated data packet based on the first packet and does not do so while receiving subsequent data packets generated from the data frame, thereby not meeting the limitations of amended claims 17 and 28.
- The Examiner respectfully disagrees. As shown in Fig. 5a of Acharya, node 520 and router 525 act together as the "switching device" claimed by the Applicant. As shown, each node has an associated router. They are shown separate for illustrative purposes in Acharya but act as a singular "switching device", as is well known in the art. It is the opinion of the Examiner that new data packets are generated by the "switching device" of node 520/router 525 based on initial processing by router 525 while continuing to receive subsequent data packets from host device 500.

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- In the Remarks on pg. 17 of the Amendment, the Applicant contends that Burwell does not disclose or suggest that error checking begins while a switching device receives data packets generated from a data frame.
- The Examiner respectfully disagrees. The disclosure of Burwell was introduced to show the use of a predetermined error checking technique that compares reference data to message data in an analogous IP over ATM transmission system. The use of Burwell's disclosed error checking technique in the system of Acharya would cause checking, as disclosed by Burwell, to begin while a switching device receives data packets generated from a data frame, as shown by Acharya.

### ***Conclusion***

**4. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

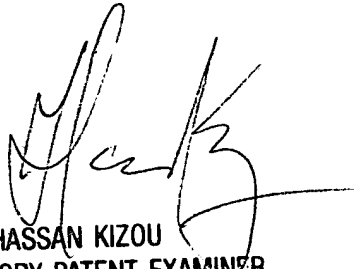
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS  
5-26-2005



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